

# ATHS FC – Math Department Al Ain (2012-2013)

## Homework Sheet (Term II)

### Grade 11 Core

Name		Date	
Section		Lessons	5.8
ID		Score/20	

## 5.8 Rational Zero Theorem

List all of the possible rational zeros of each function.

1.  $h(x) = x^3 - 5x^2 + 2x + 12$

2.  $f(x) = 3x^5 - 5x^2 + x + 6$

3.  $g(x) = 5x^3 + x^2 - x + 8$

4.  $q(x) = 6x^5 + x^3 - 3$

Find all of the rational zeros of each function.

7.  $q(x) = x^3 + 3x^2 - 6x - 8$

8.  $v(x) = x^3 - 9x^2 + 27x - 27$

9.  $f(x) = x^4 - 49x^2$

10.  $b(x) = x^3 + 6x + 20$

11.  $g(x) = 2x^3 + 3x^2 - 4x - 4$

12.  $z(x) = x^4 - 3x^3 + 5x^2 - 27x - 36$

13.  $p(x) = 2x^4 - 7x^3 + 4x^2 + 7x - 6$

**Find all of the zeros of each function.**

14.  $f(x) = 2x^4 + 7x^3 - 2x^2 - 19x - 12$

15.  $q(x) = x^4 - 4x^3 + x^2 + 16x - 20$

16.  $h(x) = x^6 - 8x^3$

17. **TRAVEL** The height of a box that Joan is shipping is 3 inches less than the width of the box. The length is 2 inches more than twice the width. The volume of the box is  $1540 \text{ in}^3$ . What are the dimensions of the box?